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EXAMINER

BUTLER, PATRICK NEAL

ART UNIT

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1791

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/070,979	Applicant(s) DOURNEL, PIERRE	
	Examiner Patrick Butler	Art Unit 1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 January 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 14-34 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 14-34 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Appeal Brief

In view of Applicant's remarks in the Appeal Brief filed 03 January 2008, prosecution of the instant application is re-opened upon further consideration of Smith et al. (US Patent No. 5,276,063) and additional grounds of rejection as cited below. As such, the finality of the rejection of the last Office action is withdrawn and a new non-final rejection is presented below. Claims 14-24 are pending in the instant application.

Allowable Subject Matter

The indicated allowability of claims 21, 32, and 33 is withdrawn upon further consideration of Smith et al. (US Patent No. 5,276,063). Rejections based on the further considered reference follows.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

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Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 14 and 18 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 20 of copending Application No. 10/580,323. Although the conflicting claims are not identical, they are not patentably distinct from each other because both teach a process of manufacturing foam using 1,1-difluoroethane and 1,1,1,2-tetrafluoroethane.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 101/112

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 14-18, 27, and 28 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 14's method of "employ[ing]" is interpreted to only provides for the use of a blowing agent, but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass.

A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

Claims 14-18, 27, and 28 are rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd. v. Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 21, 23 and 32-34 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 21 recites the limitation "the blowing agent" in line three of the claim. There is insufficient antecedent basis for this limitation in the claim. It is suggested that the antecedent basis issue be obviated by inserting "blowing agent" after "A" in line 1 of the Claim. Claims 32-34 are rejected via their dependency.

With respect to Claim 34, the claim needs to be clarified to indicate that the combined amount of the two fluoroethanes is more than 60% by weight of the composition. For purposes of examination, the Examiner assumes that the percentage applies to a mixture of the agents as in Claim 17.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 14-20 and 22-31 are rejected under 35 U.S.C. 102(b) as being anticipated by Smith et al. (US Patent No. 5,276,063).

With respect to Claims 14, 18, and 24, Smith teaches making a closed cell foam using 1-1-difluoroethane and 1,1,1,2-tetrafluoro-ethane as blowing agents (see abstract; col. 3, lines 4-8; and col. 3, line 28 through col. 4, line 12). Further additives are not required given their claimed optional presence.

Smith's list of suitable tertiary blowing agents includes 1,1,1,2-tetrafluoro-ethane as blowing agents. Thus, the agent is anticipated. A genus does not always anticipate a claim to a species within the genus. However, when the species is clearly named, the species claim is anticipated no matter how many other species are additionally named. Ex parte A, 17 USPQ2d 1716 (Bd. Pat. App. & Inter. 1990) (See MPEP 2131.02).

With respect to Claims 15-17, 25, and 26, 1-1-difluoroethane is present at 50 to 90% by weight (see col. 3, lines 4-8), and 1,1,1,2-tetrafluoro-ethane is present at less than 15% by weight (see col. 3, lines 28-33). Such a combination provides for a ratio of 3 to 6, which is at least 1.5 (Claim 15) and more than 2 (Claims 16 and 25). While allowing for about 10% secondary blowing agent (see col. 3, lines 9-13), such a

combination further provides for their collective presence to be 65-90%, which is more than 60% by weight (Claims 17 and 26).

With respect to Claims 27 and 29, Smith's produced foam is greater than 90% closed cell foam (see col. 5, lines 10-13).

With respect to Claims 28, 30, and 31, given Smith teaches the same method steps as claimed, it would be expected that Smith's product would have the same thermal conductivity.

With respect to Claims 19 and 20, Smith teaches making a closed cell foam using a composition of 1-1-difluoroethane, ethanol or methanol (an alcohol), and 1,1,1,2-tetrafluoro-ethane as blowing agents (see abstract; col. 3, line 4 through col. 4, line 12). Further additives are not required given their claimed optional presence.

Smith's list of suitable secondary blowing agents includes ethanol and methanol, and Smith's lists of suitable tertiary blowing agents include 1,1,1,2-tetrafluoro-ethane as blowing agents. Thus, the agent is anticipated. A genus does not always anticipate a claim to a species within the genus. However, when the species is clearly named, the species claim is anticipated no matter how many other species are additionally named. *Ex parte A*, 17 USPQ2d 1716 (Bd. Pat. App. & Inter. 1990) (See MPEP 2131.02).

With respect to Claims 22 and 23, 1-1-difluoroethane is present at 50 to 90% by weight (see col. 3, lines 4-8), and 1,1,1,2-tetrafluoro-ethane is present at less than 15% by weight (see col. 3, lines 28-33). Such a combination provides for a ratio of 3 to 6, which is at least 1.5 (Claim 22). While allowing for about 10% secondary blowing agent

(see col. 3, lines 9-13), such a combination further provides for their collective presence to be 65-90%, which is more than 60% by weight (Claim 23).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 14-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Smith et al. (US Patent No. 5,276,063).

With respect to Claims 14, 18, and 24, Smith teaches making a closed cell foam using 1-1-difluoroethane and 1,1,1,2-tetrafluoro-ethane as blowing agents (see abstract; col. 3, lines 4-8; and col. 3, line 28 through col. 4, line 12). Further additives are not required given their claimed optional presence.

Smith's list of suitable tertiary blowing agents includes 1,1,1,2-tetrafluoro-ethane as blowing agents.

Merck & Co. v. Biocraft Labs. taught that a reference that "discloses a multitude of effective combinations does not render any particular formulation less obvious" *Merck & Co. v. Biocraft Labs.*, 874 F.2d 804, 807, 10 USPQ2d 1843, 1846 (Fed. Cir. 1989). Thus, Smith's teaching of a multitude of effective combinations of blowing agents does not render any particular formulation of blowing agents less obvious.

Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to select 1,1,1,2-tetrafluoro-ethane among Smith's tertiary blowing agents since Smith's listing constitutes obvious combinations of blowing agents.

With respect to Claims 15-17, 25, and 26, 1-1-difluoroethane is present at 50 to 90% by weight (see col. 3, lines 4-8), and 1,1,1,2-tetrafluoro-ethane is present at less than 15% by weight (see col. 3, lines 28-33). Such a combination provides for a ratio of 3 to 6, which is at least 1.5 (Claim 15) and more than 2 (Claims 16 and 25). While allowing for about 10% secondary blowing agent (see col. 3, lines 9-13), such a combination further provides for their collective presence to be 65-90%, which is more than 60% by weight (Claims 17 and 26).

With respect to Claims 27 and 29, Smith's produced foam is greater than 90% closed cell foam (see col. 5, lines 10-13).

With respect to Claims 28, 30, and 31, given Smith teaches the same method steps as claimed, it would be expected that Smith's product would have the same thermal conductivity.

With respect to Claims 19 and 20, Smith teaches making a closed cell foam using a composition of 1-1-difluoroethane, ethanol or methanol (an alcohol), and 1,1,1,2-tetrafluoro-ethane as blowing agents (see abstract; col. 3, line 4 through col. 4, line 12). Further additives are not required given their claimed optional presence.

Smith's list of suitable secondary blowing agents includes ethanol and methanol, and Smith's lists of suitable tertiary blowing agents include 1,1,1,2-tetrafluoro-ethane as blowing agents.

Merck & Co. v. Biocraft Labs. taught that a reference that "discloses a multitude of effective combinations does not render any particular formulation less obvious" *Merck & Co. v. Biocraft Labs.*, 874 F.2d 804, 807, 10 USPQ2d 1843, 1846 (Fed. Cir. 1989). Thus, Smith's teaching of a multitude of effective combinations of blowing agents does not render any particular formulation of blowing agents less obvious.

Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to select ethanol or methanol among Smith's secondary blowing agents and 1,1,1,2-tetrafluoro-ethane among Smith's tertiary blowing agents since Smith's listing constitutes obvious combinations of blowing agents.

With respect to Claims 22 and 23, 1,1-difluoroethane is present at 50 to 90% by weight (see col. 3, lines 4-8), and 1,1,1,2-tetrafluoro-ethane is present at less than 15% by weight (see col. 3, lines 28-33). Such a combination provides for a ratio of 3 to 6, which is at least 1.5 (Claim 22). While allowing for about 10% secondary blowing agent (see col. 3, lines 9-13), such a combination further provides for their collective presence to be 65-90%, which is more than 60% by weight (Claim 23).

With respect to Claim 21, Smith further teaches using carbon dioxide and 1,1,1,2-tetrafluoro-ethane as the tertiary blowing agent (see abstract; col. 3, lines 4-8; and col. 3, line 28 through col. 4, line 12).

"It is *prima facie* obvious to combine two compositions each of which is taught by the prior art to be useful for the same purpose, in order to form a third composition to be used for the very same purpose.... [T]he idea of combining them flows logically from

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their having been individually taught in the prior art." *In re Kerkhoven*, 626 F.2d 846, 850, 205 USPQ 1069, 1072 (CCPA 1980). See MPEP 2144.06.

This, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine carbon dioxide and 1,1,1,2-tetrafluoro-ethane as the tertiary blowing agent since Smith teaches their use for the same purpose.

With respect to Claims 32-34, 1-1-difluoroethane is present at 50 to 90% by weight (see col. 3, lines 4-8), and 1,1,1,2-tetrafluoro-ethane and carbon dioxide are present at less than 15% by weight (see col. 3, lines 28-33). Such a combination provides for a ratio of 1-1-difluoroethane to 1,1,1,2-tetrafluoro-ethane of 3 to 6, which is at least 1.5 (Claim 32) and at least 2.3 (Claim 33). While allowing for about 10% secondary blowing agent (see col. 3, lines 9-13), such a combination further provides for their collective presence to be 65-90%, which is more than 60% by weight (Claim 34).

Response to Arguments

Applicant's arguments filed in the Appeal Brief 03 January 2008 have been fully considered but they are not persuasive.

Applicant argues with respect to the 35 USC § 112, second paragraph, rejections. Applicant's arguments appear to be on the grounds that:

1) In the originally filed Specification, support is provided for having greater than 60% of 1-1-difluoroethane to 1,1,1,2-tetrafluoro-ethane by weight.

Applicant argues with respect to the 35 USC § 102(b) rejections. Applicant's arguments appear to be on the grounds that:

2) Since 1,1,1,2-tetrafluoro-ethane is among 48 tertiary blowing agents, Smith does not anticipate selecting 1,1,1,2-tetrafluoro-ethane as the tertiary blowing agent.

3) Selecting 1,1,1,2-tetrafluoro-ethane would be less successful based upon expectations set forth in Smith at col. 4, lines 18-36.

4) HFC-134a (1,1,1,2-tetrafluoro-ethane) cannot be a secondary blowing agent since it does not meet the limitations for secondary blowing agents at col. 3, lines 9-27.

5) Smith does not recognize the importance of utilizing alcohol as a blowing agent.

Applicant argues with respect to the 35 USC § 103(a) rejections. Applicant's arguments appear to be on the grounds that:

6) Although Smith does disclose making insulating panels, the claimed thermal conductivity property would not be met due to lack of using the claimed blowing agents. Further Smith does not require the claimed property.

The Applicant's arguments are addressed as follows:

1) The rejection is based on the lack of clarity regarding the Claim's percentage. The rejection is not based upon the Claim having new matter or lacking support in the originally filed Specification.

2 and 6) As recited above, Smith's list of suitable tertiary blowing agents includes 1,1,1,2-tetrafluoro-ethane as blowing agents. Thus, the agent is anticipated. A genus does not always anticipate a claim to a species within the genus. However, when the species is clearly named, the species claim is anticipated no matter how many other

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species are additionally named. Ex parte A, 17 USPQ2d 1716 (Bd. Pat. App. & Inter. 1990) (See MPEP 2131.02).

3) As indicated in the cited section, Smith indicates that Smith's invention is surprising because it does not follow previous expectations.

4) Smith is not relied upon for teaching HFC-134a (1,1,1,2-tetrafluoro-ethane) as a secondary blowing agent. Instead, Smith teaches HFC-134a (1,1,1,2-tetrafluoro-ethane) as a tertiary blowing agent (see col. 3, line 28 through col. 4, line 12).

5) As recited above, Smith's list of suitable secondary blowing agents includes ethanol and methanol, and Smith's lists of suitable tertiary blowing agents include 1,1,1,2-tetrafluoro-ethane as blowing agents. Thus, the agent is anticipated. A genus does not always anticipate a claim to a species within the genus. However, when the species is clearly named, the species claim is anticipated no matter how many other species are additionally named. Ex parte A, 17 USPQ2d 1716 (Bd. Pat. App. & Inter. 1990) (See MPEP 2131.02).

6) As recited above, given Smith teaches the same method steps as claimed, it would be expected that Smith's product would have the same thermal conductivity.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patrick Butler whose telephone number is (571) 272-8517. The examiner can normally be reached on Mon.-Thu. 7:30 a.m.-5 p.m. and alternating Fridays.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina Johnson can be reached on (571) 272-1176. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/P. B./

Examiner, Art Unit 1791

/Richard Crispino/

Supervisory Patent Examiner, Art Unit 1791